Exhibit 14

UNITED STATES PATENT AND TRADEMARK OFFICE
_____

BEFORE THE PATENT TRIAL AND APPEAL BOARD
_____

EMC CORPORATION,
Petitioner,

v.

ACQIS, LLC,
Patent Owner.

_____

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

_____

Held: December 8, 2015

_____

BEFORE: MICHAEL P. TIERNEY, MICHAEL J.
FITZPATRICK, and ROBERT J. WEINSCHENK,
Administrative Patent Judges.

The above-entitled matter came on for hearing on Tuesday,
December 8, 2015, commencing at 1:00 p.m., at the U.S. Patent
and Trademark Office, 600 Dulany Street, Alexandria, Virginia.

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

APPEARANCES:

ON BEHALF OF THE PETITIONER:

      BRIAN M. BUROKER, ESQUIRE
      BLAIR SILVER, ESQUIRE
      THOMAS A. BROWN, ESQUIRE
      Gibson, Dunn & Crutcher, LLP
      1050 Connecticut Avenue, N.W.
      Washington, D.C. 20036-5306

ON BEHALF OF PATENT OWNER:

      WAYNE STACY, ESQUIRE
      BRITTON F. DAVIS, ESQUIRE
      SARAH GUSKE, ESQUIRE
      Cooley, LLP
      380 Interlocken Crescent
      Suite 900
      Broomfield, Colorado 80021-8023

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   P R O C E E D I N G S

2   -   -   -   -   -

3   JUDGE WEINSCHENK: Good afternoon everyone.

4   This is an oral hearing for IPR2014-01462 and IPR2014-01469.

5   As you all can see, Judge Fitzpatrick is joining us remotely via

6   video conference. In order for him to hear you, you will need to

7   step up to the podium and speak into the microphone. Also,

8   when you are referring to slides in your presentation, please use

9   the slide number so that he can reference them as well.

10   Let's start with appearances. Who do we have for

11 petitioner?

12   MR. BUROKER: Your Honors, Brian Buroker from

13 Gibson, Dunn & Crutcher. I also have with me my colleague,

14 Blair Silver. Andrew Pistilli, a legal assistant in our office, will

15 be running the slide deck for me. And then in-house counsel,

16 Tom Brown from EMC Corporation, is also present.

17   JUDGE WEINSCHENK: Thank you. Who do we have

18 for patent owner?

19   MR. STACY: Wayne Stacy --

20   JUDGE WEINSCHENK: Could you step up to the

21 microphone.

22   MR. STACY: For patent owner, myself, Wayne Stacy

23 and backup counsel Britton Davis, and here at the table is Sarah

24 Guske.

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   JUDGE WEINSCHENK: Thank you. As we indicated

2   in our order, each side will have 45 minutes to present their case.

3   We'll start with petitioner and follow with patent owner. Before

4   the petitioner begins, please let us know if you would like to

5   reserve any time for rebuttal. You may start when you are ready.

6   MR. BUROKER: Your Honor, Brian Buroker and I

7   would like to reserve 15 minutes of time for rebuttal, if that's

8   okay. I have hard copies of our slide deck for the two judges who

9   are present. May I approach?

10   JUDGE WEINSCHENK: Sure.

11   JUDGE FITZPATRICK: While he is doing that, is

12   Mr. Dill in the room? And if so, Stoney, could you give me the

13   phone number for the bridge connection in case of technical

14   difficulty. I take it he may not be in the room.

15   JUDGE TIERNEY: We are looking into that. We'll get

16   it to you when we have it.

17   JUDGE FITZPATRICK: Thank you.

18   JUDGE WEINSCHENK: You can hear us now, right?

19   JUDGE FITZPATRICK: I only need that in case of

20   kind of an emergency. So I hope to not use that number. We

21   should go ahead and proceed.

22   JUDGE WEINSCHENK: Let's get started.

23   MR. BUROKER: Good afternoon, Your Honors. May

24   it please the Board, my name is Brian Buroker, as I said earlier.

25   We are here on two IPR proceedings, the 1462 proceeding which

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   relates to the '872 patent and the 1469 proceeding which relates to

2   the '814 patent. I may use the patent numbers instead of the

3   proceeding number. So I hope that will be okay with Your

4   Honors.

5   Let's go to slide 4. On slide 4, Your Honors, we have

6   just for the convenience of the Board highlighted the grounds that

7   were instituted and the bold highlighting on the claims indicates

8   which of the independent claims. And as you can tell from this

9   slide, many of the instituted grounds relate to the Horst reference

10 and only one ground relates to Bogaerts. So for time sake, I am

11 going to focus more of my comments on Horst, but certainly I am

12 able to answer any questions you may have about the Bogaerts

13 reference as well.

14   So just for background, as the Board described in its

15 institution decision, the instituted claims here relate to a modular

16 computing system that connects computer modules to a console.

17 And in the context of that structure, the computer modules need

18 to communicate with elements within the console and they do so

19 according the patent using low voltage differential signaling or

20 LVDS. And the LVDS channels, they say, are serial.

21   So the key dispute here isn't about that structure because

22 I think as we'll go through and show, both Horst and Bogaerts

23 show that structure. The key dispute here is what is

24 communicated over those LVDS channels in serial form.

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   As we demonstrated, we believe, in our opening petition

2   and in the reply, Horst and Bogaerts disclose a computer system

3   with CPUs that communicate address and data bits or bit streams,

4   depending on the patent, of PCI bus transaction across the serial

5   LVDS channel to peripheral devices that use industry standard

6   PCI bus transactions.

7   Patent owner's defense here relies on an attempt instead

8   to add additional limitations to claim that simply aren't present.

9   We'll go through each of these arguments in turn, but the primary

10   arguments are as follows. First it argues that Horst and Bogaerts

11   do not disclose the creation of a PCI bus transaction on the CPU

12   side of the circuit. But that's not required by the claims. And

13   we'll go through the claims and show you why.

14   Second, it argues that the prior art does not transmit

15   complete PCI bus transactions. But the claims don't require that

16   either. They require communication of address and data bits of

17   PCI bus transaction in the '814 patent and PCI bit streams in the

18   '873 patent. Not the entirety of the transaction.

19   Thirdly, and relatedly, it argues that the prior art uses

20   virtual addressing and not physical addressing. PCI, it says, is a

21   physical addressing mechanism. The Horst and Bogaerts

22   reference says it uses virtual addressing. But again, the claims

23   say nothing about whether the addresses have to be physical or

24   virtual. And there are a bunch of other issues that are raised both

6

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   in the papers and in the motions to exclude that we are happy to

2   address on rebuttal.

3   But let's get straight to the merits here. We should start

4   as we always do with the claim. So let's pull up slide 6. On slide

5   6 we have put both of the independent claims from the '814 patent

6   and the dependent claims that are at issue, and for purposes of our

7   convenience we have highlighted in yellow the elements that are

8   in dispute. And as you can see, there's very few elements in

9   dispute.

10   Now, what is the language in these claims that we need

11   to evaluate? First you have at the top non-highlighted a console

12   with some other elements. You have a computer module that

13   attaches to the console. And then the language of 24 says you

14   have an ACM, which is the module that comprises a number of

15   elements and at the bottom there's a number of steps that those

16   elements need to perform. So one of the elements in the ACM is

17   a north bridge. And the north bridge, it says, communicates

18   address and data bits of PCI bus transaction in serial form.

19   JUDGE WEINSCHENK: Counsel, can you clarify for

20   us what exactly in Horst you are referring to as being the attached

21   computer module?

22   MR. BUROKER: If you can go over to slide 20, if you

23   would, please, so here we've taken all of the elements of claim 24

24   and I have got a similar slide for 31 and we've tried to color

25   coordinate. So the attached computer module ACM is what is

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1 highlighted in blue. So on the top left of this slide we've got

2 Figure 2 which is sort of a higher level view of the circuit in

3 Horst. And then Figure 7 gives an example of one such

4 implementation. So Figure 7 in the bottom left-hand corner is

5 one of the three modules that is shown in Figure 2 on the left.

6   So where it says CPU and memory in each of the boxes

7 on the top, you would replace that effectively with what you see

8 in Figure 7. So that's your attached computer module. And the

9 detail in Horst says that those modules connect into the console

10 via the console's backplane. Does that answer Your Honor's --

11   JUDGE WEINSCHENK: It does. I think what I

12 understand one of patent owner's arguments to be here is that if

13 we are looking at what you have highlighted as the attached

14 computer module, where in there do we have a north bridge that

15 communicates a PCI bus transaction?

16   MR. BUROKER: So the north bridge is what we've

17 highlighted in red. It's known as the TNet processor interface.

18   JUDGE WEINSCHENK: Right. And it looks like you

19 have a TNet transaction but where do you have a PCI bus

20 transaction?

21   MR. BUROKER: So the PCI bus transaction is

22 communicated from the CPU out to the PCI device. In Figure 2

23 you can see that one of the elements in the green box along the

24 right-hand side of the green box is a PCI interface with a PCI

25 controller and then there's a long line to indicate that there are

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   additional PCI devices that can be connected there. So the flow

2   of data would be from one of the CPUs using the dashed blue

3   lines down to the PCI device. So there would be a

4   communication. And what we know, if you go to slide 35, the

5   specification -- I'm sorry, the text of Horst teaches us that TNet

6   allows all of the CPUs to communicate with any other CPU or

7   I/O controller in the network and it can issue read and write

8   portions to each other's memory. So one of the I/O controllers,

9   going back to slide 20, if you would -- actually, stay right there.

10   It's on the right-hand side as well. In the right-hand side of this

11   slide 35 you see the diagram Figure 2 and you can see on the

12   right-hand side that there are several different I/O controllers that

13   are given as examples. One of those I/O controllers is the PCI

14   controller.

15   So this is teaching us that the TNet allows

16   communication from the CPU over TNet to the PCI devices.

17   When the two communicate with a PCI device you necessarily

18   need to transmit address and data bits of PCI transaction. You

19   don't need to transmit a complete PCI transaction. If Your

20   Honor's question was where is there a PCI transaction, the answer

21   is pieces of it can be sent from the CPU down to the PCI device,

22   and that would be bits of a PCI transaction, and then the PCI

23   device can respond to that, for example, if it was a read request

24   from the CPU. The CPU could be asking the PCI device, tell me

25   what's in your memory. I'm going to give you a read request.

9

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   The response from the PCI device would be, Here is my

2   information, and it would be sent back up through the LVDS

3   channel back up to the CPU where the north bridge resides.

4   JUDGE WEINSCHENK: Can you explain to me

5   logistically how this works. For example, do you have something

6   in the CPU that has a complete PCI address of some device down

7   on the bottom right and then gets translated or changed into

8   something that can be transmitted over the TNet and then get

9   translated back into a PCI? Is that how it works?

10   MR. BUROKER: So Horst describes that you would

11   have translation tables that would allow you to translate between

12   the virtual addressing that's available in TNet and the addressing

13   of the destination. So for example, in the bottom left-hand corner

14   this is testimony from Mr. Young that says a person of skill in the

15   art would know that you could transmit over TNet using read and

16   write operations.

17   If you go to slide 36, there's text in the left-hand side of

18   slide 36 from the Horst reference that says the TNet address

19   which is one of the fields in the TNet packet which we see on

20   Figure 5 is a 32-bit window into the destination's address space.

21   So the destination of a communication from the CPU to the PCI

22   would be the PCI. So that TNet address would then allow you to

23   fill in PCI address information into the TNet packet so that it can

24   be interpreted at the processor unit.

10

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   And so the processor interface unit in this diagram

2   would indeed need to be able to translate from the TNet packet

3   into the PCI packet and vice versa. So, yes, there's an address

4   translation. We don't dispute that there is going to be some sort

5   of address translation that's done because the addressing

6   mechanism to route packets in TNet is done through the header.

7   Not the address field.

8   JUDGE WEINSCHENK: What you are saying is the

9   CPU knows the address of the PCI device that it wants to access.

10   That gets translated into a TNet which is in a slightly different

11   format, perhaps, and then it gets retranslated back to PCI on the

12   other end?

13   MR. BUROKER: Right. And the same would be true

14   on the reverse side. If you are routing a packet from the PCI

15   device up to the CPU, that TNet processor interface has to have a

16   translation table so that it can receive the PCI transaction, put the

17   relevant information into a TNet packet, route it through the TNet

18   network up to the relevant CPU.

19   So if we could go to slide 36, okay, so what does the

20   patent owner here argue as to why the claims are not met? First

21   of all, it argues that the north bridge or peripheral bridge does not

22   communicate address and data bits of PCI bus transaction

23   because there is no PCI bus transaction created on the CPU side.

24   Now, Your Honor, as we've just discussed, we believe the

25   reference teaches a person of skill in the art how to do that, to

11

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   create a PCI bus transaction or at least the elements of it on the

2   CPU side.

3   But more importantly, if you look at slide 6, looking at

4   claim 24, let's look at the north bridge element, all that's required

5   and there's two pieces to it, because there's the second clause

6   down there that gives further clarification. So you have got a

7   north bridge that's connected to the CPU. The north bridge

8   communicates address and data bits of PCI bus transaction in

9   serial form. It does not say where that PCI bus transaction has to

10 come from and it does not say where it is originated. So there is a

11 myth that this PCI bus transaction has to be created at the CPU.

12 It could be. Communication is a two-way mechanism. It could

13 be that the only PCI bus transactions created are in that peripheral

14 component that we pointed to. The north bridge would still

15 communicate the bits of a PCI bus transaction when it receives

16 them.

17   So there is sort of two theories and ways to read Horst,

18 one of which is the CPU certainly knows how to create or at least

19 send the data that will be used to formulate a PCI transaction

20 through the translation table. The second way of viewing it is

21 that on the reverse side when the PCI but transaction is created in

22 the bottom right-hand corner of Figure 2 and pushed up toward

23 the CPU, that when the north bridge receives it, it has

24 communicated address and data bits of a PCI bus transaction by

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   receiving them. So that's our view as to why the first argument

2   they raise doesn't have any merit.

3   JUDGE WEINSCHENK: Let me ask you this. Doesn't

4   the term "transaction" imply that there's an exchange between two

5   PCI buses? If we were to have a PCI bus transaction, wouldn't

6   that be information being sent from one PCI bus to another PCI

7   bus? Doesn't that imply that we have two of them, one on each

8   side?

9   MR. BUROKER: I don't believe so, Your Honor. Even

10   if you go back to 35, I think, slide 35, on the right-hand side what

11   you see is there are multiple PCI devices along that right-hand

12   side. There's a PCI interface, a PCI controller and that long line

13   signifies that there could be many. And the text talks about many

14   different PCI devices. So what we are talking about is a PCI

15   device that would create a transaction, put it on the PCI bus and it

16   would be received by the PCI interface. So you would have two

17   parties to that transaction. And then the PCI interface would do

18   its job to translate various information into the TNet packet to

19   route it up to the CPU.

20   JUDGE WEINSCHENK: Are you suggesting that as

21   long as there's information sent across the TNet that can be

22   translated into a PCI transaction, that you have met the claims?

23   MR. BUROKER: Actually, less than that, Your Honor.

24   The way this claim, they chose to write it, go back to slide 6

25   again, please, is all you need to communicate are address and data

13

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   bits of PCI bus transaction. We agree that there has to be a PCI

2   bus transaction somewhere, but the only thing that needs to flow

3   across that LVDS channel are address and data bits. You don't

4   have to have the complete transaction. You don't have to have

5   the complete configuration file that a PCI bus transaction might

6   have. You don't need the command information or the byte

7   enables. That's not what they chose to claim. If they had wanted

8   to claim that, they could have said conveying the PCI bus

9   transaction in serial form. Or there's a bunch of different ways

10   they could have claimed it.

11   If we can go to slide 7, just so we are clear, the

12   language in claim 54 of the '873 is slightly different, we admit,

13   but there again, it's actually even broader because what has to be

14   transmitted there is an encoded serial bit stream of PCI bus

15   transaction. So you just need a bit stream of the transaction. It

16   doesn't even specify that it has to be address or data. We know

17   that from looking at dependent claim 61 which is highlighted on

18   this slide 7 as well that specifies that the encoded bit stream

19   comprises encoded PCI address and data bits.

20   So claim 54 has got to be broader than claim 61 and

21   covers a bit stream that's not even address or data bits. So that's

22   really the third response to patent owners was we read their

23   argument as requiring that you have to transport across the LVDS

24   channel the entire transaction, and that's not simply what they

25   claimed.

14

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   So another argument that they make and that the patent

2   owner makes in its submission is that -- and this is related to what

3   we have been discussing, that the only PCI bus transaction that's

4   ever created is in the bottom right-hand corner of Figure 2. Let's

5   go to slide 35 again, please. So they would confine the PCI bus

6   transaction in Horst to the bottom right-hand side of your screen

7   of Figure 2. And again, there's a difference then between what is

8   a PCI bus transaction and the bits of it. And the TNet packet

9   would necessarily include some of the bits. It certainly includes

10   the data. There's no dispute about that. If you are going to

11   transmit, if you have a PCI device on the right-hand side and it

12   wants to write its memory up to the CPU, you are necessarily

13   going to carry the data with it. There's no dispute about that. So

14   the data bits piece of the claim is virtually undisputed. The only

15   dispute here is whether there's an address that's transmitted. And

16   we know that the bits of the address would necessarily be

17   included.

18   Now, how do we know that? Let's look at slide 38. So

19   in the initial petition, our expert, Mr. Young, looked at Horst and

20   testified that to communicate with peripherals, including a PCI

21   bus, the interface, he's talking about that PCI interface or the

22   interface on the peripheral transmits address and data bits from

23   the peripheral over the TNet links. And in the reply, because

24   there was a dispute about how this mechanism would work in

15

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   view of Figure 5, Figure 5 we think pretty clearly says that the A

2   field is the window into the destination.

3   Mr. Young explained, well, you would fill in the TNet

4   transaction address, that A field, with a 32-bit PCI address. You

5   need to send some information to allow the other side to figure

6   out how to respond to it anyway. Just fill in the address field in

7   the TNet packet with the address of the PCI bus transaction.

8   That's one way of doing it. A person of skill in the art would

9   recognize from Horst.

10   Now, he admitted on cross-examination from patent

11   owner, and that's in their slides, I'm sure we'll get to it, that it's not

12   explicitly stated. Again, this is an obviousness analysis and he, as

13   a person of skill in the art, said that's the most logical way to do

14   so.

15   JUDGE WEINSCHENK: I don't think there's any

16   question, right, that the actual information that's sent on the

17   LVDS channel doesn't have to be in the PCI industry format,

18   right? It's going to be changed because it's going to be serial.

19   The question is, would there have been a PCI address in the CPU

20   to start with? Do we know that?

21   MR. BUROKER: Well, it doesn't have to be in the

22   CPU because remember, it only has to reach the north bridge.

23   Claim 24 just says that the north bridge which is connected to the

24   CPU communicates it. So at minimum the way the claims are

16

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   written, you just have to get the PCI information to the north

2   bridge is our view of how you read the claims.

3   JUDGE WEINSCHENK: Do we know that there's

4   going to be a 32-bit PCI address in the north bridge at some

5   point?

6   MR. BUROKER: Well, our view is that that's the most

7   logical way to do it. If you are going to transmit address

8   information from the PCI bus transaction, you have got 32 bits to

9   use and you've got a 32-bit address, why would you throw

10 anything away?

11   But even if you argue there's some sort of virtual

12 addressing, there's testimony from patent owner's expert that in

13 virtual addressing, you would perhaps throw away some of the

14 bits and use the 12 most significant bits or least significant, the

15 12 bits on the right of the packet. You have at least transmitted

16 12 of the bits. Again, the claim just says that you communicate

17 address and data bits. It doesn't say all of the address and data

18 bits. It just says address and data bits. Our view is that that's the

19 natural reading of the claim.

20   I know there's an argument that this is a new argument

21 that we've presented in reply, but candidly, that's just the way the

22 claims should be read and that's the way we read them when we

23 did the petition consistent with what Mr. Young in the top left

24 said in his opening petition -- in the declaration that goes along

17

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   with the opening petition that all you have to do is transmit

2   address and data bits.

3   JUDGE WEINSCHENK: If we are operating under

4   patent owner's position that some of the data bits get thrown away

5   before it's sent over the TNet, do those address bits get added

6   back in on the other side so that you can actually locate where

7   you want to go in the PCI device?

8   MR. BUROKER: Right. So in order for that all to

9   work, to throw away any bits in a virtual addressing environment,

10   there has to be an address table that allows you to complete and

11   figure out where those bits are intended to go. So exactly. Our

12   view is that a person of skill in the art would know that you have

13   got to create the PCI address somehow. You can either send all

14   32 bits of the address or you can send some part of the address if

15   there is a lookup table on the receiving end. So if there's a lookup

16   table in the receiving end, there's a configuration that takes place.

17   And Horst talks about a configuration. So even if you did have to

18   have all 32 bits according to this claim, which we say you do not,

19   we believe there's a sufficient teaching in this reference that a

20   person of skill in the art would view that to be an obvious way of

21   solving the problem.

22   That gets to my, what I view as their fourth argument

23   and I think we've largely covered this, but I want to make sure I

24   touch on it. They make an argument about, well, the prior art,

25   Horst and Bogaerts too, but Horst in particular uses virtual

18

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   addressing and PCI's physical addressing. But the claims don't

2   say physical addressing. They don't say you can't use virtual

3   addressing. Again, it goes back to the claims which only says

4   you have to transmit address bits of PCI bus transaction.

5   So let's look again at slide 30. So here is where we've

6   put together some testimony from their expert in a quote from the

7   patent owner's response which lead us to believe that they are

8   arguing that not only do you have to have all of the address bits

9   but you have to have other things from the PCI bus transaction

10   for the claim to be met. In the top left-hand corner they suggest

11   that you can't have a PCI bus transaction unless you send the

12   configuration information. The next one down, Dr. Lundenstruth,

13   their expert suggests that the claims require all address and data

14   phase information including the PCI data and byte enables during

15   the data phase. And there's several other quotes we've got here

16   on the slide. Again, we don't believe that that's a requirement in

17   these claims and we think that all the Board needs to find is if

18   there's transmission of some bits of address and data, and we get

19   that by looking simply at the claims.

20   Go to slide 31. Again, we've highlighted the relevant

21   portions here on slide 31 of the claims which don't ever say you

22   have to submit all of the address or data bits. Earlier I mentioned

23   the claim differentiation point between claim 54 of the '873 patent

24   and claim 61 of the '873 patent which suggests that certainly for

25   the claim 54, at most, you have to have a bit stream and it doesn't

19

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   even have to be address and data. So again, we think that that

2   argument undermines their theory that you have to have all

3   address bits.

4   If there's no further questions about Horst, I wanted to

5   quickly touch on a few points about Bogaerts.

6   JUDGE WEINSCHENK: That's fine.

7   MR. BUROKER: Could we go to slide 53. So the

8   analysis for Bogaerts is very similar to what we just talked about

9   but let me reorient you. Instead of having the TNet network,

10 what you have in those large circles in the top left Figure 13 that's

11 shown is the SCI network.

12   JUDGE WEINSCHENK: I actually have a question

13 before we get into too many details here. Are you relying on

14 Figure 13 embodiment or Figure 15 embodiment or are you

15 arguing they should be combined? I'm not sure I follow the

16 argument that you are making here because you kind of cite to

17 both of them.

18   MR. BUROKER: Your Honor, Figure 13, we believe,

19 shows all of the elements of the claim. Figure 15 is another

20 embodiment where they have taken a Pentium chip and included

21 various components so it's an alternative attached computer

22 module and it teaches that it can be plugged into an SCI ring.

23 And so Your Honor, I think it's a little bit of both. We are

24 arguing Figure 13 discloses everything.

20

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   We are also arguing that it would have been obvious

2   because this is all one project to take the module of Figure 15 and

3   plug it in either in substitution with one of the blue boxes on the

4   top left or in addition to. And the idea was that you could add

5   many, many of these modules in Figure 13. So the idea, yes, is

6   that for certain elements, for example, there's an argument that

7   none of the boxes in Figure 13 is there a PCI bus transaction

8   created on the CPU side. Again, we said we don't think that's a

9   requirement, but if you look at Figure 15, that module, there is a

10   PCI bus there. There's a LAN component connected to that PCI

11   bus. If it created a PCI bus transaction, that is on the CPU side of

12   the module. It's in the CPU module.

13   So our argument is if that is a requirement, then

14   Figure 15 solves that problem. And we draw the box around two

15   of the components and say that's your peripheral bridge. And it

16   does have one of the elements of this claim, 31, is that there has

17   to be a connection between the peripheral bridge and the CPU

18   without any intervening PCI bus.

19   So you see the CPU in orange. You see the line that's

20   going down in the middle of the blue box. In between that and

21   the red box, that is a CPU bus. It's hard to see, but in the bottom

22   right hand of Figure 15 off to the right, it says CPU bus. So that

23   is trying to indicate that that line on the far right is a CPU bus. So

24   that's why we cited to Figure 15 to say if that is something they

21

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   say is required, which we don't believe it is, then Figure 15

2   plugged into Figure 13 solves that problem.

3   JUDGE WEINSCHENK: Is there somewhere you can

4   point me in your petition where you argued that it would be

5   obvious to plug one from 15 into one from 13?

6   MR. BUROKER: Well, in the reply we certainly cited

7   to Figure 15 and we cited Figure 13 together and said that they

8   were different embodiments that could be -- teachings about how

9   you would use the disclosure of Bogaerts. I would have to go

10   back on a break and see if we specifically said that in the petition.

11   It may have been that we raised that in the reply in response to

12   the argument that patent owner made about needing to have a

13   CPU side PCI bus transaction.

14   JUDGE WEINSCHENK: Okay.

15   MR. BUROKER: So I'm at a good stopping point. My

16   colleague tells me I have got about 15 minutes. Why don't I rest

17   and save my remaining time for rebuttal.

18   JUDGE TIERNEY: I would like to ask a few

19   questions. There was an issue raised about whether Bogaerts is

20   actually prior art. The issue I would like you to address is courts

21   have looked to whether references are indexed, cataloged,

22   keyword searchable at the time and critical date. Can you please

23   explain how Bogaerts was made available in such a fashion that

24   one could actually have done that.

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   MR. BUROKER: So actually what patent owner

2   submitted was the indexing record from the CERN Library which

3   shows that the item was available in the CERN Library. That

4   record suggests that it is an indexed and cataloged database.

5   There is the librarian of ours that submitted the document that

6   says at least as of today that's a cataloged and indexed database.

7   We do not have somebody from the CERN Library who testified

8   that -- it's a Swiss entity and they were not willing to cooperate

9   when asked to provide a declaration. But that's, we believe,

10   sufficient evidence that it is in a library that has a

11   keyword-searchable field, according to that screen shot, to prove

12   printed publication and availability.

13   In addition, Your Honor, that's one of the reasons why

14   we submitted or created additional information that was

15   submitted into evidence which was the Wayback Machine

16   evidence to suggest that the article was also available on the

17   Wayback Machine which we believe is sufficient to show public

18   availability and widespread distribution. So all of that totality of

19   information, we think, shows that the article was searchable in the

20   CERN Library or via the Internet from the server that's got the

21   URL that's in the Wayback Machine.

22   JUDGE TIERNEY: Refresh my recollection, at what

23   point are we saying that it was publicly searchable? I understand

24   we have evidence to show it's searchable today. I understand

25   there's evidence to show that it was publicly available in the sense

23

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   that if you knew it existed, you could go and locate it is what I've

2   seen. But as to when it became publicly searchable by just

3   keywords, titles, indexing, can you direct me to what piece of

4   evidence shows that?

5   MR. BUROKER: I think the best piece of evidence on

6   that issue is the document itself which says the reports are --

7   earlier reports have been publicly available, the document being

8   provided to a library and reported in the database. Then we have

9   the CERN database record which we believe has indicia to show

10   that it's searchable.

11   Now, do we have anybody who can swear that in 1996

12   it was searchable? I don't believe that's in the record. I'll check at

13   a break to see if my colleague will correct me, but I think that's

14   the most evidence I can point you to.

15   JUDGE TIERNEY: Thank you.

16   JUDGE FITZPATRICK: Could you keep that

17   statement but with reference to the exhibits. You referred to the

18   documents.

19   MR. BUROKER: I'm sorry.

20   JUDGE FITZPATRICK: Exhibit 1013 you referred to

21   a statement, I think, that appears on there somewhere or

22   reportedly does. Could you find that.

23   MR. BUROKER: Pull up slide 62, please. They have

24   got the Exhibit Numbers on. So -- no, go to the next one, 63. So

25   this is going to be exhibit --

24

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   JUDGE FITZPATRICK: It may be this document. I

2   have got multiple files out. Maybe this document was filed as a

3   different exhibit. So let's use the 1462 case. Let's use references

4   from that case.

5   MR. BUROKER: Your Honor, what I have got on the

6   screen is the 1469 Exhibit 2011 which is the declaration of Scott,

7   who is our librarian who attached a copy of the CERN database

8   printout. And that of course is from 2014/'15. It's not from 1996.

9   But that is the index which says it was received --

10   JUDGE FITZPATRICK: I'm catching up to speed. I

11   got the 1469 set of documents out and I see Bogaerts is

12   Exhibit 1011. And what exhibit is the declaration?

13   MR. BUROKER: 2011.

14   JUDGE FITZPATRICK: Okay.

15   MR. BUROKER: So that record shows that at least

16   currently, granted it doesn't show what was available in 1996, but

17   that there is subject categories, detectors and experimental

18   techniques that could be used to search for it. There were

19   keywords and subject matter indexing related to this document in

20   the library. And the top left-hand corner shows a search button

21   right under where it says CERN Document Server. There's a

22   search button. So it indicates that as of today it's searchable. I

23   grant that we don't have evidence that shows in 1996 that it was

24   searchable, but we believe there's other indicia that it was

25   publicly available to bolster what we have pointed you to.

25

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   JUDGE FITZPATRICK: Thank you.

2   MR. BUROKER: Thank you. I'll reserve the

3   remaining time.

4   MR. STACY: So with your permission, whenever you

5   are ready?

6   JUDGE WEINSCHENK: Whenever you are ready.

7   MR. STACY: The first thing I want to show you is

8   Exhibit 2011 at 439. This is the same document that was up. It's

9   from the Spencer Scott declaration. I want to see if I can answer

10   the question for you. I don't know how to zoom this in. There we

11   go. So this is the library card. In my generation it was the card

12   catalog. And so this is the CERN Library card. And Mr. Buroker

13   wants to point to that submitted by date October 2, 1996.

14   Well, we asked the author what that date meant and he

15   said that's the date it went to the committee. He had no

16   knowledge of it ever going to the library. He actually even

17   checked with one of the other coauthors, Hans Mueller,

18   confirmed the same thing. That is the submitted date. So that's

19   when it went to the committee.

20   What does the CERN Library actually tell us about the

21   date it was indexed in CERN? It's that bottom, record created

22   12/18/2014. We know that's the card catalog date because

23   Mr. Scott downloaded it much later. That is the date that the

24   indexed version of Bogaerts was first available.

26

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   And keep in mind what Bogaerts we are talking about

2   here. You don't get to run all of these together. They led with

3   Bogaerts 1. And that was the one that had that bar code up in the

4   upper left-hand corner, if you remember. And they represented to

5   this Board that that bar-coded version was available, publicly

6   available in 1996. There's absolutely no evidence of that. That

7   bar-coded version, the first time we can date it is to 2014. So

8   that's the first time we know that that document was searchable.

9   And they didn't try to swap out Bogaerts 1 for

10   Bogaerts 2. If you remember all that stuff about the sunshine

11   server and that second place and it might have been available in

12   '96, made no effort to swap it out. So the only Bogaerts we are

13   talking about is the file-stamped copy. It was searchable in 2014.

14   What do we know about the other Bogaerts? We know

15   that their expert went to that site, tried to download the PDF.

16   Wasn't available, that Bogaerts 2. PDF wasn't available. Instead

17   it was eight postscript files. I don't know if any of you have ever

18   seen a postscript file, but it's gibberish. Then what he was saying

19   is that somebody would take these eight postscript files, stitch

20   them together and that would be publicly available.

21   We asked him, he's the expert, is a postscript file text

22   searchable? No idea. So all we know is we've got some

23   postscript files sitting on a personal server, not even the CERN

24   server, because again, our expert, one of the coauthors, knew

25   where it was sitting. It was sitting on Hans Mueller's personal

27

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   server. Nothing about that is indexable. Nothing about that is

2   publicly available.

3   JUDGE WEINSCHENK: Was there a link to that

4   server, though, from the main CERN website, though? I think

5   there's evidence that shows you could go to the CERN website

6   and it would link to that server.

7   MR. STACY: There is evidence that you could go to

8   the RD24, that's the group, home page. There is absolutely no

9   evidence in '96 you could link through. What you could do is a

10 big crawler could go find that that postscript file was there.

11 That's the only evidence we have that that was actually publicly

12 available or searchable or indexed in any way. Otherwise it's just

13 a giant set of postscript file mess, eight files sitting on a personal

14 server that could be accessed if you knew where to go. No

15 evidence it was publicly searchable or indexable. So no evidence

16 of accessibility.

17   But you can't even get there because they led with that

18 file-stamped copy and the Board instituted on it. Now, we heard

19 for the first time they actually talked to somebody at CERN. But

20 if you remember back, they didn't ask you to get a deposition.

21 They didn't ask you for a declaration. There's a copending

22 District Court case. They had the power to go get a subpoena if

23 they wanted to or at least try. So we shouldn't be playing this

24 guessing game now in Bogaerts. It was their responsibility.

28

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   So the next thing I want to do is answer a question from

2   you, Judge Weinschenk, that was asked about the PCI. And to

3   get us kind of back to where we were, I wanted to start with slide

4   49. So slide 49 is the four-byte TNet address. And the question

5   is what goes in that address and then what happens up at the

6   CPU?

7   Well, first of all, as Mr. Buroker promised, we are going

8   to get there quickly. We asked their expert, where in the TNet

9   document does it say that the PCI address can be substituted in?

10   He was very forthcoming. There's nowhere in the Horst -- and

11   remember, Horst is TNet. So nowhere is it there. So then they

12   have to go to the obviousness argument.

13   But Judge Weinschenk, you asked about how does the

14   procedure work? What does the format look like? Well, this was

15   the whole fight over that withheld document and the reason this

16   was so troublesome. So this withheld document is ServerNet 2.

17   ServerNet 2 is ServerNet 1. ServerNet 1 is the same as TNet, and

18   it says it right in the document. The same set of people drafted

19   the Horst document as the ServerNet 2. There's an overlap in that

20   working group. So when you look at ServerNet 2, you can see

21   exactly how that TNet process works.

22   What's important is the bottom. See that local physical

23   address? When you are starting from whatever side, the first time

24   that you have a true physical address is at the end of the process.

25   And remember, a PCI address must be a physical address. That's

29

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   the standard. It's always a physical address. Never a virtual.

2   That's why it matters. And we've heard some argument about the

3   claims don't say virtual or physical. Yes, they do. PCI address is

4   a physical address by definition.

5   So when in ServerNet or TNet or Horst, however you

6   want to refer to it, does the physical address first exist? Keep in

7   mind their expert wasn't shown this document. We weren't

8   shown this document. We had to dig it out of a pile of litigation

9   stuff that they turned over to us. But what we know is you start

10   up front with the ServerNet address. You run it through an

11   address validation and translation table and at the end you get the

12   local physical address.

13   JUDGE WEINSCHENK: Why is that problematic? If

14   you are sending address bits over the TNet that can -- maybe they

15   are encoded in some way but on the other end you could decode

16   them and get a PCI address, why is that not covered by the

17   claims?

18   MR. STACY: It absolutely doesn't because you are

19   never starting with an address here. So their expert describes it

20   before he changed his position in his original declarations, he

21   describes it as Scrabble cubes. I've got a PCI address, I have got

22   it spelled out here, 32-bit word, and I take it, I put it on my serial

23   line. So that's the whole point. I'm going from parallel, I'm

24   putting on a serial line. And on the bottom end I have got to be

30

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   able to reassemble my word. I have got my rules. I know what to

2   do.

3   On all of the TNets, all of the Bogaerts, they all have

4   the same issue is that there is no physical address that's then

5   scrambled and then put back together down here. You start with

6   a made-up virtual address, manipulate it and then you have some

7   kind of smart device, it's those buses in TNet, you see it in those

8   figures on what goes on the bottom side by the PCI device that

9   creates the PCI address for the first time.

10   JUDGE WEINSCHENK: I guess I'm struggling to

11   understand though why that matters, right. Why do you have to

12   have a physical address to start with? Why can't it be virtual or

13   some other address? As long as it's information that you could on

14   the other end translate into a PCI address, why does that not meet

15   the claims? I think we agree that what you are transmitting

16   across the channel doesn't actually have to be in perfect PCI

17   format, right? You can change it.

18   MR. STACY: Format, I agree. I do not agree that the

19   content can be changed. The content has to be the same. In other

20   words, think of my Scrabble cubes. I have got a word here. I can

21   jumble it, do whatever I want to in the middle. But on the back

22   end I have got to be able to build that same word again. That's

23   what the claims require. If you don't do that, you have destroyed

24   your PCI standard. You have destroyed the very purpose of this

25   invention. The whole point is you start PCI, whether you start

31

1   here or down here, it makes no difference, whether it's the CPU

2   or the printer. You start with the PCI address that's in this

3   parallel slow form, serialize it and then take it back to the PCI

4   form at the other end.

5   JUDGE TIERNEY: I would like to go back to the

6   language of the claims because I think we are reading a few

7   things in and I want to make sure it's okay to do so. Let's start

8   with the '873 patent claim 54. We are talking about encoded

9   serial bit stream. Why do I want to read in the words physical

10   address?

11   MR. STACY: It is an encoded serial bit stream of

12   peripheral interconnect bus transaction. The Board has already

13   said that the PCI is important, that it's part of it. So you have got

14   to go to the standard. The PCI standard does not allow a virtual

15   address. So you would be reading PCI standard out of claim 54.

16   So in other words, if you put a virtual address in, it's no longer a

17   capital PCI bus transaction. It's something completely different.

18   And that's just straight out of the standard. Dr. Lindenstruth

19   references that several times and we'll talk about that.

20   Now, there's something interesting here. They keep

21   going back to this claim differentiation doctrine on claim 61

22   which showed up in the reply for the first time. You heard it the

23   same time we did, but I would like to the address that.

24   JUDGE TIERNEY: Before we move on, you

25   mentioned that basically you have to have all of the content

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   transferred. There was an argument, however, that said the 32

2   bits, some could be not completely moved along. Are you taking

3   the position that your claim requires every bit of information has

4   to be carried along for the physical address?

5   MR. STACY: Yes.

6   JUDGE TIERNEY: And the claim says that because?

7   MR. STACY: Because you are getting the address bits

8   of the PCI bus transaction. It's like saying a telephone number. It

9   indicates you are getting the full telephone number. If you take

10   less than 32 bits, you don't get to the printer.

11   JUDGE TIERNEY: Actually, let's take a hypothetical.

12   Here in the Patent Office we sometimes go with extensions: 2,

13   dash, any number of 1000. So we don't have the full number,

14   571-272-1000. We just send the number 2, dash 1000. That still

15   can be sufficient information for us to understand who to call. Do

16   we require a new claim that the full address has to be conveyed or

17   does a sufficient amount of information convey what is sufficient

18   to identify that address?

19   MR. STACY: So within the Patent Office, you have a

20   standard. You have a phone book. You have procedures that you

21   put out there. You said it's 2 and then your four-digit. You could

22   have made it eight and your four digits, but somebody somewhere

23   wrote down what your procedures are going to be. That's the

24   Patent Office telephone standard.

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   Here we have the PCI standard. And there are two in

2   exactly two different addressing schemes. You see it every day

3   when you buy a laptop, 32-bit processor or 64-bit. This was the

4   days of the 32-bit when this was drafted. But the PCI standard is

5   32 or 64. You send 31, it breaks. You have to have the full

6   piece.

7   JUDGE WEINSCHENK: So what if you sent 31, like

8   we send a shortened number here and it knows at the other end to

9   add in the 32nd bit? Doesn't that convey sufficient information

10   for a PCI bus transaction?

11   MR. STACY: No, it absolutely doesn't. Because what

12   you are doing is saying that the transaction happens at the end.

13   The printer prints and that's true. The printer prints. My CPU

14   says print this document. The printer prints. But the whole point

15   of this invention and these claims is that they are centered around

16   dealing with a standard. All of the computers out there have PCI.

17   And so the point was, how do you speed up PCI? And the point

18   is you take it from parallel to serial and then back to parallel.

19   And that's the point. If you somehow say, well, okay,

20   we are just going to do away with PCI, that's not the invention

21   and that's like saying I'm going to buy a new Windows machine

22   and I'm not going to use PCI. I'm just going to use a 30-bit rather

23   than 32. It doesn't work. You violated the standard. Just like

24   internally, if you don't know to put 2 instead of 8, your four-digit

25   number does you no good. You have to have the PCI standard.

34

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   And the Board has already gone to that in saying that

2   PCI isn't part of the standard. By the way, when you looked at

3   their expert and we asked their expert, what do you think about

4   the Board's construction? He said it's broad, it's reasonable and

5   it's not inaccurate. That's probably the best you'll ever get from a

6   professional expert. I didn't press him to say will you admit it's

7   accurate but he just kept saying it wasn't inaccurate. He wasn't

8   going to quarrel with the Board. So we've already answered that

9   question. It must be by the PCI standard. Anything less is not

10   the PCI standard.

11   And an important thing here about 61, they said 61

12   somehow offers claim differentiation. This is something their

13   expert came up with. Well, if you look at the standard, there are

14   three types of information included in every PCI transaction.

15   Three types. There's an address, there's data and then there's

16   control. That's straight out of the standard. You have those three

17   things.

18   There is a special type of PCI transaction known as

19   interrupt acknowledge. In an interrupt acknowledge, the address

20   is zeroed out. It's null. So if you look at claim 54, it says all PCI

21   bus transactions. That covers everything. What does claim 61

22   do? Claim 61 narrows it and says this PCI transaction has to have

23   encoded PCI address and data bits. Claim 61 actually carves out

24   those interrupt acknowledges. It carves out a specific type.

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   And when you look at 24, 24 and 31 are at the narrower

2   group of PCI transaction types. They are talking about the

3   transaction types that have an address and those are

4   non-interrupt-based ones.

5   JUDGE FITZPATRICK: If I understand this correctly,

6   then, it's your position that a PCI bus transaction, that term in

7   claim 54 does not require address bits and claim 61 expressly

8   does and that is why claim 61 is narrower and differentiated?

9   MR. STACY: Correct. Practically it carves out the

10   interrupt acknowledge PCI transactions in claim 61.

11   JUDGE FITZPATRICK: Is there any -- there's also a

12   rule about claim construction that terms are to be given some

13   meaning and not read to be extraneous. Is there any reason for

14   the last three words in claim 61, "and data bits"?

15   MR. STACY: No. I mean, with claim differentiation,

16   there's also significant warning that what the claim differentiation

17   tail doesn't wag the construction dog. When we pressed their

18   expert on the basis for that construction, I asked him about the

19   spec, I asked him about the file history, and he had nothing else to

20   support the construction. When you look --

21   JUDGE FITZPATRICK: You had also mentioned that

22   it's in the reply. So maybe there is no evidence but I'm going to

23   ask anyway, is there evidence from your side about this -- what

24   was the term you called? Interrupted?

25   MR. STACY: It's an interrupt acknowledge.

36

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   JUDGE FITZPATRICK: Is there evidence in the

2   record that that refers to a PCI transaction that lacks address data,

3   address bits?

4   MR. STACY: So your question was is there anything

5   in the record, and I'm in a quandary there because I didn't get to

6   put anything in. So in the record, no, because the first time

7   anybody saw this was in the reply. But with your permission I

8   can show you something that's in the record but not specifically

9   briefed. This is Exhibit 2001 on page 37.

10   JUDGE FITZPATRICK: Exhibit what?

11   MR. STACY: 2001. I'll introduce what the document

12   is. It is the PCI local bus standard Chapter 3 and it's titled Bus

13   Operation. And --

14   JUDGE FITZPATRICK: I'm there with you.

15   MR. STACY: The piece we are looking at is Section

16   3.1.1, Command Definition. And right up top you see the initial

17   command, the interrupt acknowledge. So the interrupt

18   acknowledge is a big part of the PCI because you have got to get

19   the processor's attention or you've got to get the device's

20   attention. Then down at the bottom we highlighted for you, the

21   address bits are logical don't cares during the address phase. So

22   keep in mind the PCI standard has two timing requirements and

23   they have what they call a data phase which the data is

24   transmitted, so it's a time, and then the address phase. And in the

25   address phase they send the address and the control bits. So

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   during that phase the control bit, if it's an interrupt acknowledge,

2   you can see that the address bits are don't cares. So that's the way

3   claim 61 is narrowed. Does that answer your question?

4   JUDGE FITZPATRICK: Thank you, yes.

5   MR. STACY: So one thing I would like to make sure

6   that as we go through this discussion that you keep in mind 54 is

7   different than 24. Fifty-four requires the encoded serial bit

8   stream of peripheral component Internet connect bus transaction.

9   That includes the information necessary to make a PCI

10   transaction under the defined standard. That includes data, that

11   includes address except for the interrupt acknowledge, and that

12   includes the control bits every time. So you didn't hear a word

13   about control bits, period. There is no such thing -- just put it

14   bluntly, there is no such thing as a PCI transaction that does not

15   have control bits. To carve control bits out of claim 54 and 61 is

16   to make sure it does not comply with either the standard of a PCI

17   or the purpose of the invention.

18   So when we talk about 54, you have to talk about

19   control bits. And not once do they talk about Horst or Bogaerts

20   transmitting any type of control bits. Just doesn't happen. And it

21   doesn't happen in those systems because they are actually

22   radically different systems. We went and got our expert because

23   he was an expert in the prior art that was cited. Those systems

24   are for massively parallel computer systems. Bogaerts, for

38

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   example, was built to process the data at the CERN supercollider

2   because nothing else existed.

3   And our expert, Dr. Lindenstruth, was the guy on the

4   ground building that system. So he knows what these systems do.

5   And he said over and over you can't take these virtual addresses

6   on these serial networks and just put PCI on them. It will destroy

7   it. It will actually cause address collisions. It will render them

8   inoperable. The reason people like Horst and TNet came up with

9   these systems is because PCI did not work. They had to come up

10 with a proprietary bus. And that's said on the first page of Horst.

11 Horst next to the picture of PCI says we considered all of the

12 standard buses. We looked at all of them and decided all of them

13 were insufficient. We designed our own. And Bogaerts is the

14 same way. When you look at them, SCI and the TNet systems

15 are both massively parallel systems. They have a proprietary

16 network in the center that actually does the serial transmissions.

17   JUDGE WEINSCHENK: Your patents also changed

18 the bus too, right? You said a parallel bus doesn't work so we are

19 going to change it to a serial bus. So it's also not a standard PCI

20 bus.

21   MR. STACY: You have got a standard PCI bus, you

22 have got the invention, depending on how you do it, but you have

23 got the new bus in the center, and what that's doing is taking the

24 parallel 32 bits coming down, putting them on a serial bus,

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   moving them and then taking them back out. It's an hourglass

2   when you think about it, here, here, transmit, go back out.

3   JUDGE WEINSCHENK: Explain to me, I think I want

4   to make sure I understand exactly what Horst does, then. If you

5   have got a CPU that wants to send data to a PCI device, it has to

6   send the data and it has to send an address to where that data is

7   going to be stored in the PCI device?

8   MR. STACY: Correct.

9   JUDGE WEINSCHENK: How does it know, if it

10   doesn't have the address of the PCI device originally, how does it

11   know where to send it to?

12   MR. STACY: It doesn't know that it's a PCI device. It

13   just knows it's sending to that printer right over there. You have

14   got whatever protocol is being done up top, in Horst it's TNet.

15   You've got a TNet protocol. You may have something

16   proprietary coming off the processor. There's no PCI transaction

17   that exists on the processor. It's then -- in Horst it's then

18   translated using these virtual address tables sent across the serial

19   bus, picked up by another smart device down here that generates

20   the physical address and ships it off.

21   But I understand the appeal of saying, well, I say print

22   and it prints, therefore, it must be done. And if our claim was that

23   broad, that might be a problem, but the claim is actually to solve a

24   specific problem with systems using PCI. And that's the reason

25   that PCI standard matters.

40

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   But if you look at any of these devices, Horst, Bogaerts,

2   there's no PCI standard or there's no PCI address that is somehow

3   being packaged or encapsulated and shipped across the serial line

4   and unpacked down here because this device simply does not

5   know. The CPU simply does not know what the address is for

6   this down here. That's created and that was the document I

7   showed you. That's created through the address table and the

8   virtual address. You never ever in these systems are starting with

9   PCI. You just aren't.

10   JUDGE WEINSCHENK: So you are saying this isn't as

11   simple as having a PCI address dropping off a few bits and then

12   adding them back on the other side?

13   MR. STACY: No. And in fact, the documents that are

14   from these same set of authors talk about one of the major

15   difficulties is handling this address translation. And that's why

16   we were so angry about the withheld documents because those

17   withheld documents by the same group of people show

18   unequivocally that it is a difficult process. And the reason --

19   because you are having to manage all of these addresses across

20   these big parallel systems. It's just, these systems are simply not

21   like the system that was improved here. This is more related to

22   personal computers, smaller, non-massively parallel systems.

23   So with that, let me go back to slide 10. I'm going to

24   skip through. I think we answered a lot of the questions, but this

25   is the one piece I did want to focus on and that is this. So this

41

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   was the Board's original construction and this is what's key, is it

2   peripheral -- PCI industry standard bus transaction. So when we

3   move away from that industry standard bus transaction, we are

4   moving away from this preliminary construction.

5   And we know this preliminary construction is right. I

6   can tell you it's right, but I might have my own agenda here. But

7   this right here is from Mr. Young, petitioner's own expert. And I

8   just want to make sure that you see the exact language so there's

9   no debate that PCI transaction is defined by the standard.

10   So this was Mr. Young. That's pretty clear that when he

11   got to his reply, he abandoned his original construction, applied

12   yours. And just in case, because I was surprised I got it the first

13   time, I asked him again to make sure we were crystal clear, same

14   reply. This is after he had had a chance to look at everything: I

15   think it is the broadest reasonable interpretation. It's not

16   inaccurate. This is -- it's the broadest reasonable -- it's a good,

17   broad, reasonable interpretation.

18   So this issue should be closed. There's no dispute on

19   this at this point in time. We are living with a PCI standard. And

20   what petitioner has tried to do is say, okay, we are stuck with the

21   PCI standard, but we only need two bits of that address. We are

22   going to drop back and apply a brand new construction and say,

23   well, okay, you don't have to send the whole PCI address. Just

24   send a couple of the bits. As we've talked about, that's not a PCI

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   transaction. That has nothing to do with the purpose of these

2   claims.

3   What you have done is actually you have created

4   something brand new. And TNet and Bogaerts are very clear that

5   they have created a brand new proprietary protocol rather than

6   using the standards, which is what's really going on here, to have

7   standard on the front end, standard on the back end and a serial

8   link in between. And you just don't see that with Horst or

9   Bogaerts. There's no standard on the front end that drives a

10   standard transaction on the back end.

11   And that Scrabble cube example is not mine. It actually

12   came from their expert. And I think it's important that we focus

13   on what their expert said at the beginning and how he changes

14   position later because that Scrabble cube analogy was something

15   that came out of his original declaration or the deposition on his

16   original declaration. Later he backed away from it.

17   So just to be clear, Dr. Lindenstruth is the parallel

18   processor expert. He is the guy that helped build the CERN

19   system. Horst is right there similar to it. And he was very, very

20   clear. The LVDS channel, that's the serial channel, does not

21   transmit address and data bits of PCI bus transaction. This is the

22   guy that knows.

23   JUDGE TIERNEY: A standard PCI bus transaction?

24   MR. STACY: Correct. If the Board moves away from

25   the construction that it originally had and the construction that

43

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   their expert agrees to and says it doesn't have to be a PCI

2   standard, then we have a different issue.

3   JUDGE WEINSCHENK: I have a question. I'm not

4   sure if you have this in your slides, but I was looking at Figure 8

5   of the '873 patent.

6   MR. STACY: If you give me 30 seconds, I'll pull it up

7   and put it on the board for us. Did you say Figure 8 of the '873

8   patent?

9   JUDGE TIERNEY: Yes.

10   MR. STACY: What was your question?

11   JUDGE WEINSCHENK: I think it helps to look at the

12   figure, but to me it looks like we may have something that at least

13   on its face looks similar to what's in Horst. I'm curious if you can

14   explain to me why it's different because now that it's up there,

15   you can see we have on the computing side, the CPU side, we

16   have a CPU connected to an interface and then we've got a sort of

17   serial channel, I assume, between the two. And the first

18   appearance of a PCI bus is on the peripheral side, and it looks to

19   me that it's very similar to what we've got in Horst where the first

20   appearance of a PCI bus is in the peripheral side.

21   MR. STACY: If you are comparing drawing to

22   drawing, they superficially look exactly the same. But when you

23   look at what's really talking about this -- and keep in mind, the

24   patent isn't limited only to -- let me phrase this correctly. The

25   specification is not only PCI. It talks about other types of

44

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   communication protocols also. But the point here is -- actually,

2   this point is there's no intervening PCI bus. But when you look at

3   this and when you read it, there is a PCI transaction here that is

4   Scrabbleized and then put on the serial link and then recreated

5   back here. There's nothing inconsistent with the claim here.

6   And again, it looks -- you can abstract any computer

7   system to this level. You've got to look under the covers. If you

8   are going to comply with the PCI standard, which I believe

9   Figure 8 is a PCI limited embodiment, I would have to confirm

10   that, you need to take the PCI transaction on the front end,

11   serialize it and do the PCI transaction on the back end. That's this

12   embodiment. By the way, if you look at this, this is a computer

13   system. Not this massive parallel system.

14   JUDGE WEINSCHENK: Does there need to be a PCI

15   bus on the CPU side or does it just have to be something you can

16   call a PCI address and data or do we actually need a bus there? I

17   think you have argued in your papers that you need a bus. That's

18   what I'm curious about because this one doesn't show a bus on the

19   CPU side.

20   JUDGE TIERNEY: Let me direct you to page 5 of

21   your patent owner response.

22   MR. STACY: I think it may depend claim by claim.

23   JUDGE TIERNEY: Patent owner response of the 1462

24   case.

25   MR. STACY: Page 5 you said?

45

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   JUDGE TIERNEY: Yes. Figure 8 illustrates that.

2   MR. STACY: Correct, there's no PCI bus.

3   JUDGE TIERNEY: And consequently the TNet link

4   does not generate PCI bus transactions or PCI transactions at the

5   CPU side.

6   MR. STACY: Correct. I think that's a description of

7   Horst. You don't have to have the PCI bus. The PCI bus is a

8   good indicator. But what we know from Horst, their own expert

9   agrees, there is no indication there's a PCI transaction on the

10   processor side within Horst.

11   JUDGE TIERNEY: So can you relate that information

12   that we just discussed that is on the CPU side there's no PCI bus

13   with Figure 8 of your patent in the '873 patent?

14   MR. STACY: So on Figure 8 of the '873 patent, you

15   have to look at the text. It's talking about a PCI transaction. And

16   so the claims don't require a bus. They require a PCI transaction

17   to take place. You are looking at the standard the whole time.

18   I'm putting a transaction together that looks like a PCI

19   transaction. So all of my PCS-compliant drivers know how to

20   read it. So I have created my PCI transaction. That's why it

21   matters, my drivers can read it. And then I'm taking it at a

22   parallel form, putting it into serial form and then back to parallel.

23   The point about Horst is that Horst doesn't have a PCI

24   transaction that is then serialized. And one indicator is that

25   there's no PCI bus but it makes no difference whether there is.

46

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   You could generate a PCI transaction without a bus. The point is

2   and when you looked at the -- remember the sheet that I showed

3   you, the transaction is defined on what data goes where.

4   JUDGE TIERNEY: But the way it was worded was

5   basically what I was reading was because there's no PCI bus on

6   the CPU side, the TNet link does not generate PCI bus

7   transactions.

8   MR. STACY: That is the description of Horst there.

9   JUDGE TIERNEY: Then I look over at Figure 8 and I

10   don't see a PCI bus on the CPU side.

11   MR. STACY: So in Figure 8 the illustration -- I mean,

12   all of these are kind of at cartoon level. Figure 8, when you

13   match it with the description, it's talking about the type of

14   transaction. So you are starting with your PCI transaction and

15   converting it. There are a lot of things that aren't shown in a

16   seven-box drawing. But the point is if you are trying to match it

17   to the claims, you are taking a PCI transaction and serializing it.

18   That's what you are starting with.

19   JUDGE WEINSCHENK: Can you explain to me again

20   how we know in Horst that the CPU doesn't start with a PCI

21   transaction and scramble it into a TNet and then re-unscramble it

22   to a PCI? So the lack of a PCI bus is not determinative is what

23   I'm hearing you say.

24   MR. STACY: That's correct. The lack of a PCI bus is

25   indicative but not determinative. In this particular instance they

47

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   have been able to point to nothing that shows that there's a PCI

2   transaction ever generated. Processors have their own proprietary

3   buses and proprietary formats. And when we pressed their expert

4   showing where is that PCI address, and I showed you the quote

5   earlier, where is the PCI address in Horst? And he said it's

6   nowhere. It's nowhere. I can't find it anywhere, but it would be

7   obvious. It would be simple to put it in.

8   And Dr. Lindenstruth who builds these kind of systems,

9   this is his expertise, said you can't use it. You can't use a PCI

10 address on a serialized bus in these type of systems without

11 rendering it inoperable. You are going to run into address

12 collisions. You are going to have terrible problems.

13   So they walked away from the 102 side of it saying it's

14 there and went to obviousness. And the obviousness, if you look,

15 Mr. Young, their expert, is a man that's knowledgeable about

16 PCI. Our expert, Dr. Lindenstruth, builds these systems. He's a

17 professor of parallel processing and he said you can't do it. It's

18 not obvious. It will break it every time.

19   And so what we have is just their word for it. If you

20 look at the observations on cross, we pressed him, said, could you

21 find a single document that showed it was obvious to take a PCI

22 address and just dump it in on these links? He said, no, I couldn't

23 find a document. Could you find a witness? Couldn't find a

24 witness. How do you know? Because I'm an expert.

48

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   And that's not really entitled to much weight. He's not

2   an expert in these types of systems. And again, that came in the

3   reply brief when we didn't really have a chance to address it. We

4   went through that about putting in more evidence to address it.

5   But the point being here there's absolutely nothing in

6   TNet or Bogaerts that they argue shows that you are putting a PCI

7   address on that serial link. That's the reason they walk away from

8   that and go to obviousness and use that language, it's simple, it's

9   trivial. Any time anybody starts using those big words, you know

10   that they are in trouble. But then they walk away from that and

11   say, well, if you had two bits of a PCI transaction, that would be

12   enough. Well, even if that's right, it doesn't address claim 54

13   because claim 54 requires a PCI transaction. Got to have control

14   bits.

15   And for claim 24 and 31, the address, but you got to

16   have them all because you are going by the PCI standard. Go

17   back to your phone, because you had a standard, you know what

18   it means. The PCI standard is the same way. PCI says 32 bits.

19   These guys for these parallel systems don't want to use physical

20   32-bit addresses like the standard describes. Why? You get

21   collisions.

22   And if you look at the front of Horst, the front of Horst,

23   I think, tells you everything you need to know, is that he

24   considered PCI and said no. I'm going to build my proprietary

25   link in the center because they weren't interested in speeding up a

49

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   PCI standard transaction. They were interested in hooking up

2   massive systems.

3   JUDGE FITZPATRICK: I have a question about we

4   can look at claim 54, and the phrase "encoded serial bit stream of

5   peripheral component interconnect PCI bus transaction," in that

6   phrase would it be fair to summarize your construction of the

7   word "of" as "from" and petitioner's as "for" such that you are

8   arguing, I think, that the encoded serial bit stream must have

9   originated from a PCI to begin with. Whereas, petitioner is

10 arguing that in Horst you meet that limitation because that bit

11 stream encodes for a PCI bus transaction.

12   MR. STACY: I would quarrel with any indication that

13 we said it has to originate. I'm not sure what originate means. In

14 this instance, what that claim requires is that it is a PCI bus

15 transaction. That is defined by the standard. You know the three

16 portions: Address, data and control. And you have to take that,

17 whatever that would be in a parallel form and you are going to

18 encode it, encode a serial bit stream. So I'm taking the

19 transaction data, I don't think it matters where it originates from,

20 then I'm going to take it, I'm going to serialize it and then send it

21 out over my serial bus for speed purposes. That's why you're

22 doing all this.

23   JUDGE FITZPATRICK: Let me rephrase. I didn't

24 mean to put any special meaning to originate. Let me put it this

25 way. Your construction, I think, in claim 54 is that you have to

50

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1 have a peripheral component, a PCI bus transaction, and then

2 after that point in time you have to have an encoded serial bit

3 stream of it. And that is lacking in Horst.

4   MR. STACY: I'm working through the timing on that.

5   JUDGE FITZPATRICK: I'm focusing on the word

6 "of."

7   MR. STACY: So your questions is the starting point is

8 a PCI transaction. It's encoded. Is that the question?

9   JUDGE FITZPATRICK: Yeah. This kind of relates

10 back to your hourglass statement earlier.

11   MR. STACY: So, yes, that's the point. You have to

12 encode, have the encoded PCI transaction. So it is the hourglass.

13   JUDGE FITZPATRICK: And Horst would have -- I

14 think maybe you concede that Horst has the bottom half of your

15 hourglass analogy, correct?

16   MR. STACY: No, I wouldn't. Horst creates a logical

17 system and that was the withheld document I showed you with

18 the address virtualization table. It creates a physical address on

19 the bottom side with a special device. And I believe that's

20 Figure 9, if I'm doing it off memory. So it creates it at the very

21 end. The physical address exists at the end of the process. It

22 doesn't start at the beginning. So in other words --

23   JUDGE FITZPATRICK: Also looking at claim 54, I

24 notice that it's the computer module that has to comprise the

25 elements of the claim, one of them being the LVDS. And it's on

51

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   that LVDS channel where this data has to exist. And so is the

2   argument that in Horst by the time the data, by the time there is a

3   PCI bus transaction, you are already outside the computer

4   module?

5   MR. STACY: So it's actually even more stark than that.

6   On Horst, by the time you have a PCI bus transaction, you are on

7   a parallel PCI bus. You are back at the bottom of the hourglass.

8   So when you pull up those figures, you'll see you have got a PCI

9   bus, a formal PCI bus hooked to your printer or your storage

10   device or whatever. So at that point down there, you are back to

11   a parallel system. So the question is, does the PCI bus transaction

12   ever exist in serialized form? The answer is no.

13   JUDGE FITZPATRICK: Thank you.

14   MR. STACY: So I'm approaching 45 minutes. Are

15   there any other questions that I should answer?

16   JUDGE WEINSCHENK: Nothing from me.

17   JUDGE TIERNEY: None here.

18   JUDGE FITZPATRICK: No.

19   MR. STACY: Then the thing I would like to leave this

20   with is that the prejudice here is pretty severe in that petitioner

21   came in with one construction originally. They knew of two.

22   They were briefed in the District Court. They had their expert

23   adopt one construction that said, hey, the PCI standard doesn't

24   matter. And then they came in, let us oppose, and in their reply

25   brought in a whole host of new arguments. The first thing they

52

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   came in with was, well, if it's not there, it's obvious to put in and

2   you see the new simple and trivial language. You notice in the

3   observations of cross we submitted over and over their expert

4   said that wasn't in my original petition. We thought about it,

5   didn't put it in.

6   So you have got the new obviousness argument and

7   then you've got this brand new two bits construction. So I think

8   unfortunately, by reg, I'm required to raise the objection under

9   due process that we didn't get to fully address that.

10   JUDGE TIERNEY: Counsel, were you offered and

11   took the opportunity to file a sur-reply?

12   MR. STACY: No, I was not. I asked to file a full

13   sur-reply and the Board said no and said you can have three pages

14   to specifically address the withheld documents. And counsel

15   clarified that that was all that could be done.

16   JUDGE TIERNEY: You filed the sur-reply on that

17   issue. So we are talking about due process here. You did file

18   approximately 14 pages of observations in both cases.

19   MR. STACY: Yes. I don't know the exact number, but,

20   yes.

21   JUDGE TIERNEY: So you were able to take the

22   deposition and file the portions that you wanted us to review.

23   MR. STACY: I was able, yes, to take the deposition

24   and file portions. Was not able to develop evidence. And we

53

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   made the offer of proof that what Dr. Lindenstruth would have

2   said that disagreed with their expert.

3   JUDGE TIERNEY: Furthermore, did you take

4   advantage of and file a patent owner motion to exclude

5   identifying new arguments in reply?

6   MR. STACY: We did. And this due process issue

7   would only be a point is if the Board considered all of their new

8   arguments. If the Board followed the rules and returned the

9   reply, then our prejudice would be fixed.

10   JUDGE TIERNEY: And if the Board determines they

11   are not new arguments in the reply but rather responsive

12   arguments, how would there be a due process violation?

13   MR. STACY: Because we were not allowed to address

14   responsive arguments as responsive arguments are so limited.

15   There's nothing in these rules or the Administrative Procedure

16   Act that allows an open reply. And in fact, the rules

17   specifically --

18   JUDGE TIERNEY: But if it's responsive, how is it an

19   open proceeding? It's supposed to be narrow. It's supposed to be

20   narrow and it's responsive to the arguments that you have raised.

21   MR. STACY: The CFR requires that the petition state

22   all of the grounds. And the cases from this -- from here and from

23   due process say not only no bolstering but no new arguments.

24   JUDGE TIERNEY: But a new argument would be by

25   definition, if we determined it was not an argument, we would by

54

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   definition say that it was not necessary to make out a prima facie

2   case.

3   MR. STACY: We would have to see how that plays

4   out. If you say it's not a new argument and don't consider it, of

5   course that means there's no prejudice. But if you say it's not a

6   new argument and then use that as a basis, we never got to submit

7   evidence on it. So I apologize for taking your time with this

8   issue, but I think to keep the record preserved, I have to do it.

9   JUDGE TIERNEY: Is there anything further you

10 would like to add about the alleged new argument? Again, we

11 are trying to avoid prejudice.

12   MR. STACY: The only thing I could add is attorney

13 argument. We asked to submit the declaration from

14 Dr. Lindenstruth talking about why the two bits and focusing on

15 many of the issues that we addressed today, why two bits was

16 wrong, why it's not obvious to substitute it in, and the Board did

17 say no to that request.

18   JUDGE TIERNEY: I just want to point out regarding

19 due process, all good things must come to an end. So there has to

20 be a point at which we have to stop the evidentiary submissions.

21   MR. STACY: I do understand. And I understand that

22 the Board has specific rules where they can return the reply brief.

23 In other places they have said no. And there are procedures that

24 could have been followed in this instance. Since both of these

25 constructions were foreseeable and foreseen, they could have

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   filed two petitions initially. They could have use the pages to

2   address both constructions. They could have done the

3   self-joinder. They could have filed an issue joinder or they could

4   have simply asked the Board how do we address this from the

5   front end and then we could have addressed it there. Instead they

6   chose to lob in all of the new arguments in the reply brief. There

7   are ways to do this. We all know how to do them if you want to

8   make sure that the process is fully done.

9   JUDGE TIERNEY: Thank you.

10   MR. STACY: Thank you.

11   MR. BUROKER: Your Honor, I wanted to address a

12   number of the points sort of in serial fashion, but if there's any

13   additional questions, I would rather use the time for that to

14   answer the questions you have.

15   The first point was testimony about Dr. Lindenstruth.

16   He didn't have any knowledge about the library procedures at

17   CERN. He knew that the data was submitted in committee.

18   When asked if he knew about the procedures for when it was

19   submitted to the library, he said, I know nothing about that. So

20   we think that the document which says submitted by October 2,

21   1996, is sufficient to show that that's when it was submitted to the

22   library.

23   The second point, they try to draw a distinction between

24   what they call Bogaerts 1 and Bogaerts 2. I think the question is

25   whether this document was publicly available. And there's two

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   different versions. It would be no different than if we had a

2   newspaper article and one version was received from the

3   microfilm and another version was the actual hard copy, two

4   versions of the same document. The question would be whether

5   that document was printed publication. We think all of the

6   evidence goes to whether or not the Bogaerts substance was a

7   printed publication.

8   JUDGE WEINSCHENK: If we focus on the version

9   that you found in the Wayback Machine, is there any evidence in

10   the record that would indicate that someone searching for that

11   could have found it or that it would have been indexed on the

12   Internet in any way or that it was just available on some server

13   somewhere?

14   MR. BUROKER: Well, the version that we found on

15   the Wayback Machine, there is the versions on the RD-24 where

16   there's a link that says here is the complete report. And then there

17   is, as Mr. Stacy talked about, the eight postscript files. That eight

18   postscript-file page where you can retrieve those postscript files

19   was on the Wayback Machine. We think that this Board and

20   other Courts have taken judicial notice that that indicates that it's

21   publicly available and searchable. The text that those postscript

22   files are on talks about the report and has some subject matter

23   indications. But do we have any additional evidence beyond

24   that? No. The declaration from the Internet archive is the

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   evidence we would have of its availability to be found by a search

2   engine.

3   Third quick point, there is some talk that the

4   information from the Wayback Machine was on a personal

5   server. That's just not true. If you look at the URL, it's a server

6   hosted by CERN, which is a Swiss organization. That's not

7   somebody's personal server.

8   There was a suggestion again that we withheld

9   evidence. I think we addressed that in the Board call earlier in

10 this case. This is documentation that was provided to the patent

11 owner during litigation. It was not withheld.

12   They have argued that it's inconsistent. We don't

13 believe it is inconsistent. We believe that document shows that

14 ServerNet 2 which is a later version, so you had TNet, you had

15 ServerNet and you had ServerNet 2, that document is talking

16 about the ServerNet documents and whether they used virtual

17 addressing and if so, what kind of virtual addressing. It says

18 typically you use a fewer number of bits. Typically means not

19 always. And it's not inconsistent with Mr. Young's testimony that

20 one way to do it would be to use all 32 bits.

21   There was a lot of discussion once we finally got into

22 the merits about what the claims actually show. If I could put up

23 slide 6, please, the claims don't, again, require that a PCI bus

24 transaction be sent and received and acted upon. This claim talks

25 about conveying that information. And what information for

58

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   claim 24? It's the address and data bits of it. As we saw at length

2   and your questioning of counsel for the patent owner, 54 has

3   slightly different language which is an encoded bit stream or

4   serial bit stream of PCI bus transaction and that's in slide 7.

5   Again, this is the first we are hearing that claim 54

6   doesn't even require the address bits. But if that's true, then

7   certainly Horst and Bogaerts -- Horst which is the only one

8   applied against claim 54 disclosed transmission of the data. Now,

9   I heard that now claim 54 is rewritten to require the control bits,

10   but that's not expressly stated either. And that's certainly not

11   expressly stated in the Board's construction of the PCI bus

12   standard transaction that was offered in the institution decision.

13   So again, we have a disconnect between what the claims

14   actually say that we need to find in the reference, and that's the

15   important distinction that the Board should focus on.

16   JUDGE FITZPATRICK: In all three independent

17   claims, maybe there's more, but 24 and 31 in the '814 patent and

18   54 in the '873 patent, they all refer to either an encoded serial bit

19   stream or address and data bits. And then the next term is "of"

20   PCI bus transaction. You heard me inquire with opposing

21   counsel about this. What does "of" PCI bus transaction mean?

22   MR. BUROKER: Your Honor, you posited does it

23   mean for or from. And I would argue actually having never

24   thought about that issue before, but in hearing the question, I

25   think it actually does mean for or from, that you can read of PCI

59

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   bus transaction as being for a PCI bus transaction, but you could

2   also meet the claim if it was from a PCI bus transaction. The

3   word "of" there is meant to be a broad term to describe either of

4   those circumstances. At least that's how I would read this claim.

5   I think that's consistent with our view, particularly when you read

6   our briefing --

7   JUDGE FITZPATRICK: In the species of your

8   construction from, the from species, would Horst not read on this

9   claim? Would you concede that this claim does not read on

10   Horst? This claim being 54.

11   MR. BUROKER: Well, again, Your Honor, we believe

12   we've put in evidence that says if the CPU were to communicate

13   with a PCI bus transaction, it would create a PCI bus. At least it

14   would create the address and data fields, fill those into the TNet

15   and send those down to the PCI bus side. That's one reading.

16   The second one is that on the return side, and we didn't

17   hear any discussion about the return, but the PCI bus is going to

18   respond. For example, if it's a read request, it's going to respond

19   back to the CPU side. That PCI information will be received at

20   that north bridge. In that case, it would be from a PCI bus

21   transaction that originated on the peripheral side but it would still

22   hit the north bridge.

23   And to your other question, it would still be received at

24   the CPU over this second LVDS channel. So it's the return path

60

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   gets you there in addition. So I wouldn't concede that Horst

2   doesn't meet the from reading.

3   JUDGE FITZPATRICK: Thank you. Let me follow up

4   and focus on claim 54. The other claims might have something

5   analogous, but claim 54, don't you have to have the

6   communication in both directions? So if it's from, don't you have

7   to have it from the computer module and then also from the

8   peripheral?

9   MR. BUROKER: Well, it says you have to transmit

10 data in opposite directions. And then there's a second clause that

11 talks about communicating bit stream. So data has to go in both

12 directions, but I would argue that the PCI information only has to

13 go arguably in one. The communication could be either. So

14 there seems to be two different requirements, transmission of data

15 and then you communicate an encoded serial bit stream of PCI

16 interconnect bus transaction. That could be one direction. So I

17 read it a little differently, Your Honor.

18   JUDGE FITZPATRICK: Okay. Thank you.

19   JUDGE TIERNEY: Since we are on claim 54 and other

20 claims, you have been discussing today a little bit about what a

21 PCI standard transaction requires and it's been argued that a

22 physical address is one of the requirements for a PCI standard.

23 And for example, looking at the Lindenstruth declaration,

24 Exhibit 2021, paragraph 103, they distinguish Horst on the basis

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   of not having a physical address. Could you address that

2   argument, please.

3   MR. BUROKER: So the argument is, again, this goes

4   back to what the claim requires. We agree that somewhere in the

5   system there is a PCI bus transaction and that there is an address

6   and that that address is a physical address within the PCI bus

7   space. We agree with that.

8   But what has to be transmitted is merely the address or

9   data bits of that transaction. It doesn't have be a physical address.

10   Our argument is that this is broad enough to cover taking a

11   physical address, virtualizing it, if you would, and transmitting

12   the virtual version of the physical address. So we don't agree

13   with Dr. Lindenstruth's reading of this claim. We agree the PCI

14   standard itself does require a physical address. Hope that -- that's

15   my answer to your question.

16   JUDGE WEINSCHENK: Is there any evidence in the

17   record that Horst takes a physical PCI address and virtualizes it?

18   MR. BUROKER: Well, that's what's taught in -- so

19   there's definitely in Figure 2 there's the PCI bus on the right-hand

20   side. So we know there is a PCI bus transaction that would be

21   created. And then Figure --

22   JUDGE WEINSCHENK: I think what I understand

23   patent owner's argument to be is that it just starts with a virtual

24   address and then creates a physical address for the first time down

25   in that bottom right-hand corner of Figure 2.

62

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   MR. BUROKER: So then on page 7 under the bus

2   interface on the left-hand column of Horst, it says that Figure 8

3   shows a block diagram of the TNet bus interface. The TBI

4   translates transfers on the standard bus, which in this case the

5   standard bus is the PCI bus, into TNet read or write transactions.

6   So it's saying whatever the standard bus, and it gives examples of

7   PCI and VME and Motorola 68040, whatever that standard bus is

8   will translate that into TNet. So there would be a translation from

9   the PCI bus into the TNet.

10   JUDGE WEINSCHENK: That's only in one direction,

11   though, right?

12   MR. BUROKER: That would be in one direction.

13   Certainly there's also an interface on the processor interface that

14   would -- in Figure 7 which would do it on the return path. There

15   would be a translation. And granted, that's not as explicit because

16   the way that the reference would be read, if you are going to

17   communicate with a PCI bus device, you have got to transfer

18   information that the PCI bus could use to understand where it was

19   intended to be received.

20   JUDGE TIERNEY: Just for simplicity purposes when I

21   review this, what piece of evidence should I be directed to that

22   shows that virtual addresses would be encompassed in

23   combination with the use of a physical address to form this PCI

24   standard transaction?

63

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   MR. BUROKER: Well, I know for certain in the

2   opening petition and the related citation, Mr. Young discusses the

3   text that talks about that each --

4   JUDGE TIERNEY: I do have Mr. Young's declaration

5   in front of me, his reply declaration. Is there a paragraph or

6   paragraphs you would like me to focus in on?

7   MR. BUROKER: I don't have that -- let me check with

8   my colleague real quick. So paragraphs 30 through around 31

9   where he talks about the person of skill in the art would

10   understand that in addition to taking the 32-bit and address from

11   the PCI bus and inserting it into the A field, a person with skill

12   would know how to do one-to-one mapping which is essentially

13   one-to-one mapping as a kind of virtual addressing.

14   If there are no further questions, thank you for your

15   time, Your Honors.

16   JUDGE WEINSCHENK: Nothing further from me.

17   Anything from Judge Fitzpatrick?

18   JUDGE FITZPATRICK: Nothing. Thank you.

19   JUDGE WEINSCHENK: We are going to give patent

20   owner one opportunity to respond to anything that petitioner just

21   raised if you have anything you would like to the add.

22   MR. STACY: Thank you. I'll be very, very brief.

23   Slide 50. So the issues that were just raised were all regarding

24   TNet. I want to point, this was what Mr. Young said in his reply.

25   So point me to specific language which has a PCI address as

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   mapped in the TNet. Couldn't do it. So there is no express

2   teaching. You have to go to obviousness. And the obviousness

3   argument was not made in their original petition. This is

4   something they are now throwing out there. You won't find it in

5   the original petition.

6   What we do know, and again, I have to argue this

7   through attorney argument because we don't have the expert

8   evidence and I apologize, Judge Tierney, but we know. This

9   piece from ServerNet 2, which if you look at the front page of

10   ServerNet 2, it says it's backwards compatible. This is as close as

11   we get to a true understanding of how TNet works. You don't see

12   that hourglass.

13   Remember I said the hourglass, you start with the PCI,

14   you got the parallel bits, serialize them, get them to the other side,

15   push them back out. What do we know? We know that the first

16   time that the local physical address exists, the first time you know

17   the physical address for that printer down over here is at the end

18   of the process. And you can see it over on the left-hand side.

19   Once at the destination N node the address is translated to

20   produce the local physical address. Remember the Scrabble

21   cubes, it's actually made up at the far end because what are you

22   using? Address, validation and translation table that is in that

23   logic on that bus.

24   So the first time you ever see a parallel PCI or parallel

25   PCI address or any type of PCI address is on the bottom end. It's

Case IPR2014-01462, Patent 8,041,873 B2
Case IPR2014-01469, Patent RE42,814 E

1   generated in parallel. Parallel, serial, parallel. What this shows

2   in Horst is parallel exists down here.

3   And they use a whole lot of logic up here to go through

4   their virtual addresses. Why do they do that? Because the

5   number one reason these references exist is for massively parallel

6   systems. Think about the CERN supercollider. That's what these

7   systems are for. And what do they want to do? They want to line

8   up a row of processors and have them be able to access each

9   other's memory, access the resources. If you use standard 32-bit

10 PCI address, guess what. You got a real problem in a hurry when

11 you start lining up multiple processors. That's why you don't

12 have a PCI address on the top end. It doesn't work for these

13 massive parallel systems. And we know that because we got the

14 expert in parallel systems. Dr. Lindenstruth isn't just the PCI guy.

15 He's the guy that built these parallel systems. He knows and he

16 says you can't do it. There is no PCI transaction that's being

17 serialized and then pushed out.

18   JUDGE WEINSCHENK: Thank you very much.

19   JUDGE FITZPATRICK: No further questions from

20 me. Thank you.

21   MR. STACY: Thank you.

22   JUDGE WEINSCHENK: We conclude the hearing and

23 this is adjourned. Thank you very much.

24   (Whereupon, the proceedings at 2:44 p.m., were

25 concluded.)

66